Customer No.: 31561
Application No.: 10/711,509
Docket No.: 12405-US-PA-0P

IN THE DRAWING

Figure 1 is amended to include the legend "prior art". Withdrawal of the objection is respectfully requested.

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REMARKS

Present Status of the Application

This is a full and timely response to the outstanding non-final Office Action mailed on March 31, 2005. The Office Action has rejected claims 1-2, 8-10 under 35 U.S.C. 102(e) as being anticipated by Lee et al. US Patent No. 6,737,305 and claims 3-7 under U.S.C. 103(a) as being unpatentable over Lee in view of Yang (US Publication 2002/0102781 A1).

Claims 1-10 remain pending of which claim 1 has been amended and claim 9 has been cancelled to more accurately describe the invention. Claims 19-24 have been newly added. It is believed that no new matter is added by way of these amendments made to the claims or otherwise to the application.

Applicant has most respectfully considered the remarks set forth in this Office Action. Regarding the obvious rejections, it is however strongly believed that the cited references are deficient to adequately teach the claimed features as recited in the presently pending claims. The reasons that motivate the above position of the Applicant are discussed in detail hereafter, upon which reconsideration of the claims is most earnestly solicited.

Discussion of the claim rejection under 35 USC 102

The Office Action rejected claims 1-2, 8-10 under 35 USC 102(e) as being anticipated by Lee et al. (US-6,737305B2, Lee hereinafter).

Applicants respectfully disagree and traverse the above rejections as set forth below. Independent claim 1 is allowable for at least the reason that Lee fails to teach or disclose each and every features of claim 1. More specifically, Lee at least fails to teach or disclose a step of "...forming a channel layer over a portion of the inter-gate dielectric layer at least over the gate, wherein the channel layer is a lightly doped amorphous silicon layer" as required by the amended claim 1.

Instead, Lee teaches forming a first amorphous Si layer 106a, a second amorphous Si layer 106b and a N+ mixed amorphous silicon layer 106c as the channel layer 106 (col. 5 ln. 4-8, Fig. 4). Further, Lee simply teaches a N+ mixed amorphous silicon layer without specifying the amorphous silicon layer is lightly doped. Accordingly, Applicants respectfully submit that Lee cannot possibly anticipate the claimed invention in this regard, and therefore claim 1 should be allowed. Claims 2 and 8-10, which depend from Claim 1, directly or indirectly, are also patentable over Lee, at least because of their dependency from an allowable base claim.

For at least the foregoing reasons, Applicants respectfully submit that claims 1-2 and 8-10 patently define over Lee, and therefore should be allowed. Reconsideration and withdrawal of the above rejections is respectfully requested.

Discussion of the claim rejection under 35 USC 103

The Office Action rejected claims 3-7 under 35 USC 103(a) as being unpatentable over Lee in view of Yang et al. (US Publication, hereinafter Yang).

Applicants respectfully disagree and would like to point out that even though the Examiner relied upon Yang to disclose phosphine and boreoethan, still Yang cannot cure the specific deficiencies of Lee.

Similar with Lee, the channel layer of Yang is not a lightly doped polysilicon layer. Instead, the channel layer of Yang includes an intrinsic polysilicon layer 154a. Moreover, neither of the polysilicon layers 154a, 156a of the channel is an amorphous polysilicon layer.

Accordingly, claims 3-7 also patently define over combination of Lee and Yang. Reconsideration is respectfully requested.

Newly Added

Applicants have added claims 19-27, wherein claim 19 is written in independent form combining the features of forming a channel layer over a portion of the inter-gate dielectric layer at least over the gate and forming an ohmic contact layer over the channel

layer so as to further limit the claimed subject matter of the present invention. Therefore, it is believed claims 19-27 are patentable for the above reasons.

CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-8, 10, 19-27 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted

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Belinda Lee

Belinda Lee
Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jcipgroup.com.tw
Usa@jcipgroup.com.tw